

REMARKS

Claims 1 to 9 are pending in this application of which claim 1 is the sole independent claim. Favorable reconsideration and further reconsideration are respectfully requested.

Turning first to the specification issues, included herewith are FIGS 12A, 12B and 12C that were in the original specification but were inadvertently omitted from the formal drawings submitted on June 25, 2002. Applicants submit that omitting references to FIGS. 12A to 12C to the specification, as the Examiner has suggested, is now moot.

The Examiner has also indicated that the specification should include a summary section. Applicants submit that there is no formal requirement to include a summary section in the specification (see C.F.R. § 1.51).

Based on the amendments and remarks above, Applicants respectfully request withdrawal of the objection thereto.

Turning next to prior art rejections, claims 1 to 3 and 7 to 9 were rejected under 35 U.S.C. 102 (b) over Bazylenko et al. (U.S. Patent 6,154,582).

Claim 1 has been amended to recite a waveguide that includes a waveguide core that has a bottom surface and a top surface that defines an angle. The waveguide also includes a cladding layer adjacent to the bottom surface, where the cladding layer has a thickness equal to or greater than an evanescent tail of a mode to be transmitted along the waveguide core.

Bazylenko does not disclose or suggest "a cladding layer ... having a thickness equal to or greater than an evanescent tail of a mode to be transmitted along the wave guide core."

Bazylenko recites that the silica buffer layer has a thickness "sufficient to optically isolate the

waveguides from the substrate.” (see column 8 lines 14 to 15). Bazylenko fails to make any mention of the evanescent tail of a mode to be transmitted along the wave guide core.

Claims 1 to 3 and 7 to 9 are rejected under 35 U.S.C. 102(e) over Tran et al. (U.S. Patent 6,323,480). Tran does not disclose or suggest “a cladding layer ... having a thickness equal to or greater than an evanescent tail of a mode to be transmitted along the wave guide core.” Tran describes a waveguide cladding layer 24 with a thickness of 3 microns (see column 4 line 53), but does not describe that the thickness is equal to or greater than an evanescent tail, much less an evanescent tail of a mode to be transmitted along the wave guide core.

The noted distinction described above is not trivial, but represents an inventive step, as will be appreciated by those in the semiconductor industry. As disclosed by the Applicant in the specification,

“the intermediate cladding layer 24 prevents the evanescent tail from reaching attenuating layer 18 made of lossy attenuating material, and thin silicon layer 12. This offset increases the speed of phototransistor 40 by reducing the amount of background noise and making the phototransistor 40 more robust. Hindering the evanescent tail from reaching thin silicon layer 12 reduces the amount of extraneous light reflected from thin silicon layer 12, thereby reducing the amount of light necessary to turn on the transistor, as well as reducing the amount of scattered light, which can affect other transistors.” (see page 11 lines 1 to 12).

For at least the reasons discussed above, claim 1 and its dependent claims should be allowed.

Applicants submit that the entire application is now in condition for allowance. Such action is respectfully requested at the Examiner's earliest convenience.

All correspondence should be directed to the above address. Applicant's attorney can be reached by telephone at the number shown above.